

INDUSTRIAL SOLUTIONS

MADE IN SAUDI ARABIA

OIL & GAS PETROCHEMICAL WATER & POWER MINING GENERAL INDUSTRIES

ABOUT SHERBINY

Premium Industrial Solutions Made in **KSA**

We are an industrial solutions provider that has been dedicated to providing the highest quality premium products, local technical services and support to the Saudi market for over 30 years. We are a family owned and run business, and we believe that staying true to our values is important for leading a successful business.

Saudi Arabia is our home. It always has been, and always will be. We are honored to be able to invest in the future of our home and bring the greatest technologies to the local market. We are proud to be your trusted local partner.

Vision 2030 is more than just a single initiative, it is a statement of the ambition that we have as a nation, and a path towards building a better future for our children.







MISSION, VISION, & VALUES



Our Mission

Delivering reliability to our customers and expanding our portfolio of locally manufactured solutions to gain new markets within the kingdom with export opportunities.

Our Vision

To be the leading brand for in-house manufactured industrial solutions in KSA by 2030.

Our Values

Customer Focus

Integrity

Leadership

Family Culture

Commitment

LOCAL MANUFACTURING & ASSEMBLY





The **Sherbiny Local Assembly** facility is built to the highest international standards with brand new equipment installed. While it is the foundation of our initial efforts, it is by no means the end.

Sherbiny is continuously investing in expanding our efforts to make way for new products and services to be **made in** Saudi Arabia.

Manufacturing & Integration Agreements





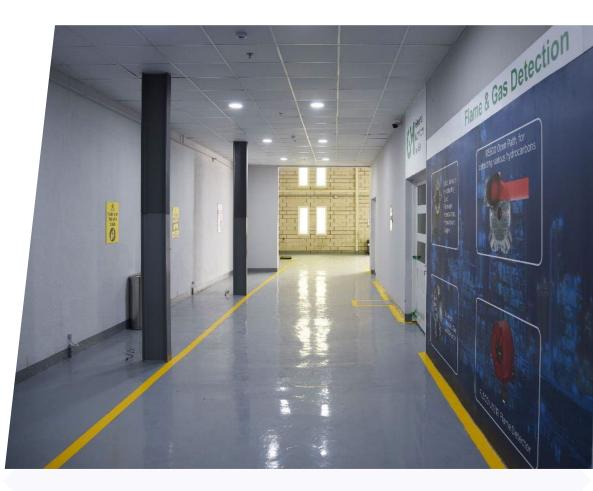
RASANA

Chemical Dosing Skids Made in **KSA**



Sherbiny's local manufacturing and assembly facilities are built to the highest standards, and with ample space for more partners and solutions. We believe in constantly improving our portfolio, with increasing levels of localization to advance the KSA economy.

Rasana by Sherbiny is a regional leader in delivering turn-key integrated industrial systems such as chemical dosing skids as well as steam & water analysis systems. We offer complete design, fabrication, and installation of our locally manufactured & assembled systems from conceptual design to operational readiness. All of our solutions combine industry leading equipment and a full range of technical services and support.





RASANA





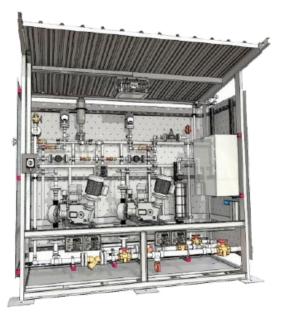
RASANA Offers:

- Locally Manufactured Skids, Complete Design, Fabrication, and Installation of Chemical Injection Solutions.
- Steam & Water Analysis System Customengineered systems designed to meet the most demanding requirements
- Standard Basic Skid

TURN-KEY SOLUTIONS



Conceptual Design



Operational Readiness



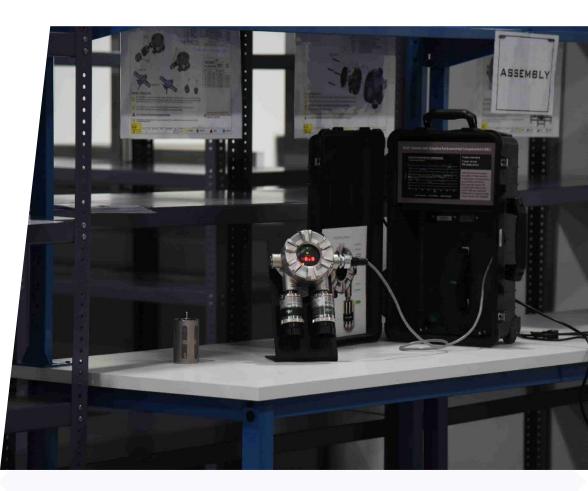
ATHEEL

Life Safety Solutions Made in **KSA**



Sherbiny's local manufacturing and assembly facilities are built to the highest standards, and with ample space for more partners and solutions. We believe in constantly improving our portfolio, with increasing levels of localization to advance the KSA economy.

Atheel by Sherbiny is dedicated to providing premium electrical and instrumentation solutions complete with locally assembled products and a full range of technical services and aftermarket support. Our initial focus will include fixed gas and flame detection, audible & visual signaling devices, PA/GA systems, and fire detection devices & systems.





YOUR TRUSTED LOCAL PARTNER





INDUSTRIES SERVED







Industrial Solutions I Petrochemicals

Sherbiny.com

OUR EXPERTISE

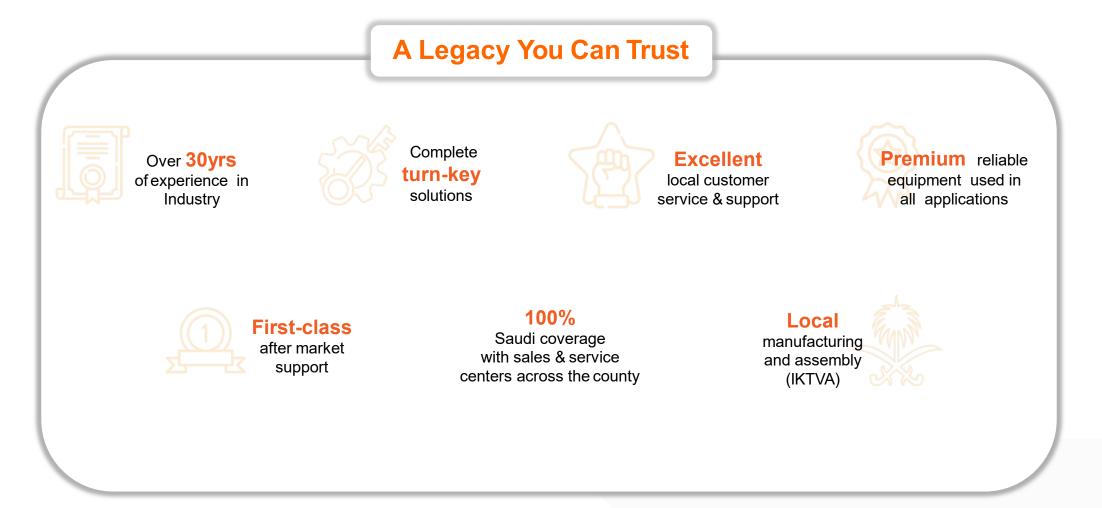




- Mechanical, Electrical, and Instrumentation Equipment Supply
- Fluid Handling, Chemical Dosing & Mixing Systems
- Life Safety & Security Solutions
- Engineering Services
- Technical Services & Support
- Explosion Proof Solutions

THE SHERBINY ADVANTAGE





SHERBINY LOCATIONS





YOUR LOCAL PARTNER FOR **PREMIUM INDUSTRIAL** SOLUTIONS

SELECTED USES CASE





You have requirements, we have solutions.



- Refineries
- Production & Processing
- Bulk & Specialty Chemicals
- Handling & Transportation
- Pipelines
- Pump stations
- Storage
- Conveyers
- Safe or hazardous areas

COMPLETE PETROCHEMICAL PROCESS





MECHANICAL SOLUTIONS

FLUID HANDLING





Sherbiny offers fluid handlingsystemsdesignedPetrochemical operations.



Our fluid handling systems are designed for extreme environments. They meet or exceed the stringent safety requirements of these industries.

Fluid handling systems for the petrochemical industry must be able to handle a wide variety of chemicals, ranging from simple oils and coolants to highly toxic ones.

The safe handling of such chemicals is critical to both the environment and human health. Therefore, properly engineered fluid handling systems are essential to this process.

FLUID HANDLING





- Chemical Injection Skids
- Foam Skids
- Fluid Transfer Skid
- Filtering & Separation Skids
- Heat Exchanger & Filter Skids
- Metering & Manifold Skids
- Steam & Water Analysis Systems

Industrial Solutions I Petrochemicals

PUMPS & COMPRESSORS

Pumps and compressors are crucial parts of the petrochemical industry because they work with pressure to move chemicals, gas, water or other required fluids.

The reliability and safety of your pumps and compressors, directly affect the performance of your entire system and greatly benefits the entire mechanical process, including refineries, natural gas plants, chemical plants and many more applications.

Our products offer a high level of quality and longevity with low maintenance costs.







Sherbiny offers a full range ofpumpsdesignedpetrochemical operations.



PUMPS & COMPRESSORS





Dosing & Metering Pumps

- Provides a smooth pumping action with no pulsation and very low shear.
- Vertical Pumps
- Utilizes a unique shaft and bearing support configuration that allows the volute to hang in the sump while the bearings are outside the sump.
- Submersible Pumps
- Operates while completely submerged in the liquid it is pumping.
- Gear Pumps
- A gear pump uses the meshing of gears to pump fluid by displacement.

PUMPS & COMPRESSORS





- Axial Flow Centrifugal Pumps
- Create less pressure than radial flow centrifugal pumps, but they can produce much higher flow rates.
- Mixed Flow Centrifugal Pumps
- Helps liquid flows through the impeller of a mixed flow pump and to the pump suction.
- Radial Flow Centrifugal Pumps
- Helps the radial outward movement of the in the impeller which causes higher centrifugal forces.
- Axial Split Casing Pumps
- Used to transport large volumes of liquid over long distances and high geodetic heights as in water and oil pipelines.

PUMPS & COMPRESSORS







Self Priming Pumps

- Designed to retain the amount of water needed for self-priming.
- Air Operated Double-Diaphragm Pumps
- Designed for pumping liquids with high apparent viscosity, even if containing suspended solids.
- Sealless Pumps
- Used to form a completely sealed liquid end or pressure boundary.
- Centrifugal Compressors
- Achieves pressure rise by adding energy to the continuous flow of fluid through the rotor/impeller.



PUMPS & COMPRESSORS

Progressive Cavity Pumps

- Designed where the volume cavity is fixed, and its flow is proportional to the speed.
- High Pressure Pumps
- High pressure pumps take the LNG from the suction drum and send it to the high-pressure vaporizers.

Volute Pumps

Sherbiny.com

• The volute of a centrifugal pump is the casing that receives the fluid being pumped by the impeller, maintaining the velocity of the fluid through to the diffuser.





VALVES





Sherbiny offers variations of valves for your Petrochemical operations.



Valves for the petrochemicals industry are used for controlling chemical processes.

Valves work by directing or controlling the flow of a fluid such as, gases, liquids, fluidized solids, or slurries by opening, closing, or partially obstructing various passageways.

Our valves are designed to help you safely optimize flow through pump control stations and assemblies requiring special surge equipment and safety shutoffs.

VALVES





Butterfly Valves

- Used for flow regulation in large pipe diameters.
- Needle Valves
- Can be used to regulate or complete the isolation of the fluid.
- Safety Valves
- Acts as a fail-safe.
- Strainers
- Stops particles from entering your line while preventing backward flow.
- Control Valves
- Used to control fluid flow by varying the size of the flow passage.

VALVES





Gate Valves

- Incorporates a sliding gate to block fluid flow (slide gate valves).
- Ball Valves
- Uses a hollow, perforated and pivoting ball to control liquid flowing.
- Globe Valves
- Used for regulating flow in a pipeline.
- Check Valves
- Permit liquids and gases to flow in only one direction
- Plug Valves
- Low torque actuation for pump control, shut-off and throttling operation.

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ENGINES



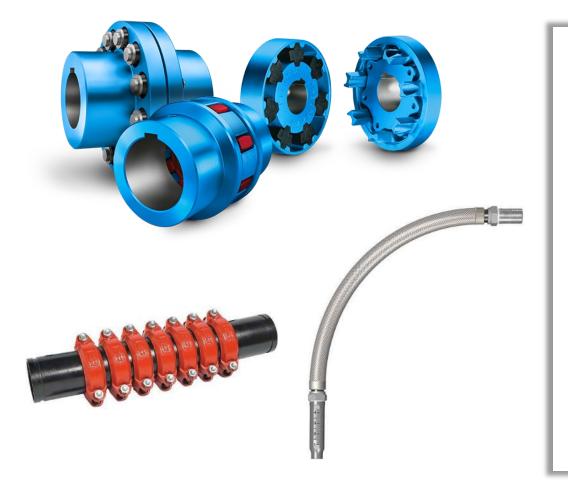


Gas Engine:

- A fully developed monitoring function, including remote monitoring, creates high levels of reliability.
- Maintenance intervals 60,000 operating hours for major overhauls and 30,000 for cylinder heads cut maintenance costs.
- Seamless dual fuel mixing evens out gas production fluctuations by supplementing natural gas as needed.
- High power engine density reduces space requirements and installation costs.
- The low-vibration engine has negligible impact on buildings.

CONNECTION COMPONENTS





Couplings

 Elastic couplings are mateable and easy to assemble. The elastomer element compensates for shaft misalignment and absorbs impacts from the motor or work machines.

Joints & Hoses

- Combination of flexible couplings and custom grooved pipe spools, joined in tandem to provide increased expansion
- High pressure hose; 100% Victaulic design and manufacturing Up to 10× faster than threaded black pipe, 100% kink resistant

OVERPRESSURE PROTECTION





Rupture Discs

- Designed to be used in aggressive chemical and pharmaceutical applications.
- Operates in both gas and liquid applications.
- Provides for depressurization of vessels, emergency relief of processing equipment and disposal of vapors by vent.
- Isolating Pressure Relief Valves
- Upon explosion detection, compressed air is released at high speed and within milliseconds the sleeve is "pinched" to full closure, stopping explosion propagation beyond the valve.

PROCESS HEATING





Oil & Gas Shut Off Valves

- Provide protection for fuel-burning equipment.
- Industrial Burners
- Used for controlled burning of fuel by mixing the optimum ratio of air with it.
- Burner Management Systems
- Controls and monitor the temperature in a heated vessel.
- Controls safety systems used to ensure safe startup and shutdown process burners.
- Electric Heaters
- Allow users to control how much heat is applied.

FILTRATION





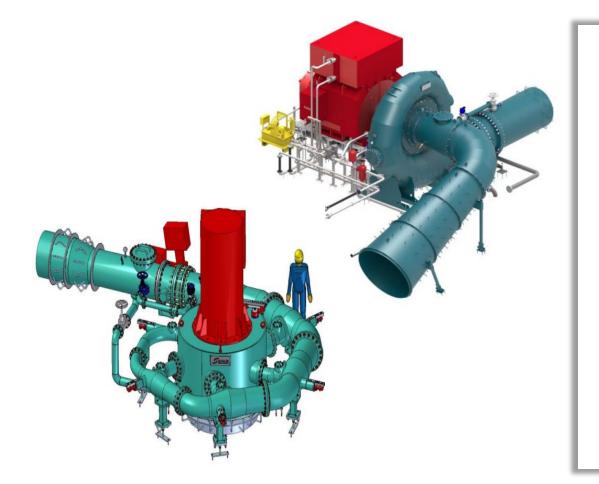
- Electro-Magnetic Filtration
 - Protects cooling towers and heat exchangers for continuous filtration
- Turbine Air Intake Filters
- Ensure highly efficient filtration of dust particles and more.
- Fluid Filtration

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- Separates solids from fluids by a medium where only fluid can pass.
- Coalescer / Separators
- Separate particles like dirt, water, liquid droplets from fluids.
- Filter Cartridges
- Used to remove unwanted particles, pollutants, and chemicals from liquids.

ENERGY RECOVERY





- Hydraulic Energy Recovery Systems
- Energy recovery includes any technique or method of minimizing the input of energy to an overall system by the exchange of energy from one sub-system of the overall system with another.
- **Francis Turbine** up to 25 MW per unit. For medium head applications with medium flow.
- **Pelton Turbine** up to a 25 MW per unit. Used for higher heads and for smaller flows.
- **Kaplan Turbine** up to 20 MW per unit. The best solution for low pressures with high flow.

PRESSURE VESSELS





Boilers

 Closed vessel boiler, heats fluid. The heated or vaporized fluid exits the boiler for use in various processes or heating applications, including water heating, central heating, boiler-based power generation, cooking, and sanitation.

Heat Exchangers

- Used to transfer heat between a source and a working fluid. Heat exchangers are used in both cooling and heating processes.
- Specialized Pressure Vessels
- Designed to hold gases or liquids at a pressure substantially different from the ambient pressure.

ELECTRICAL & INSTRUMENTATION SOLUTIONS

GAS & FLAME DETECTION

For all industries, explosive and toxic gases are a daily risk.

Gas and Flame Detection products are designed to safely protect you from the risks associated with the excessive concentration of these gaseous compounds such as methane, carbon dioxide, hydrogen sulfide and chlorine.

We provide the most complete range of gas detection solutions to safeguard your employees against toxic gases and prevent explosions.

Gas and Flame Detect safely protect you from

Sherbiny offers gas & flame detection systems designed for your operations.





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GAS & FLAME DETECTION









Fixed LEL Detectors

- Continuously monitors for flammable gas leaks over large open areas.
- Fixed H2S Detectors
- Operates over a wide temperature range using a variety of gas sensing technologies.
- Fixed Flame Detectors
- Monitors for radiation emitted by a flame in both the ultraviolet (UV) and infrared (IR) spectral ranges.
- Gas & Flame Detection Systems
- Modular system offering the widest range of control cards for use in an integrated fire and/or gas detection system.

MASS NOTIFICATION





Sherbiny offers notification systems designed for your operations.



Modulator Sirens:

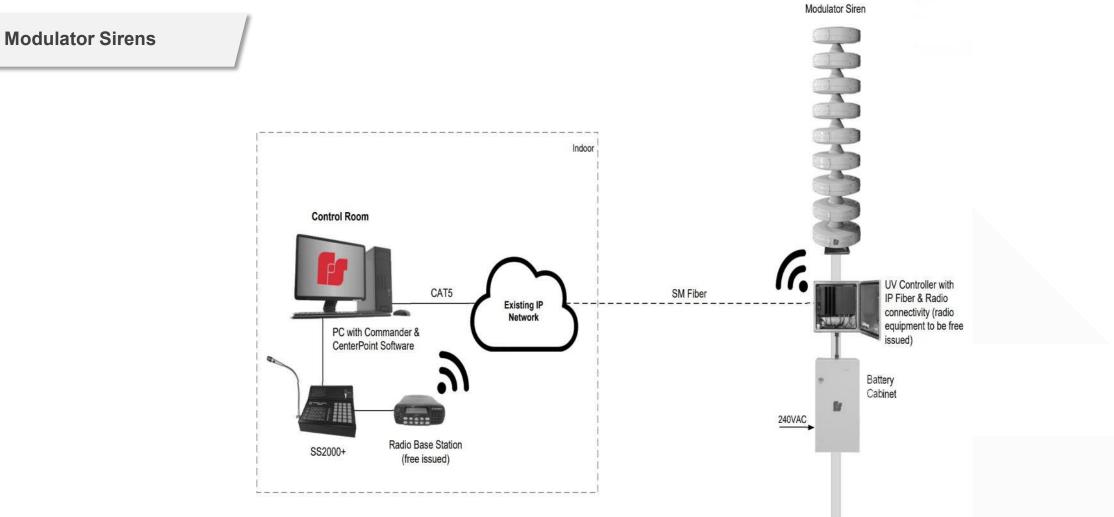
 Excellent frequency response for clear voice reproduction, 360° coverage without sound variation in horizontal planes, easy servicing through convenient access panels and is anechoic chambercertified.

Public Address & General Alarm (PA/GA):

Provides real-time system status, including event logs, system activity, broadcast status, impedance speaker monitoring, fan management and amplifier thermal status, the controller and amplifiers support multi-voice audio and the Intelligent Speaker Monitoring and Tapping is fully configurable with broadcast priority, has front rack access for ease of maintenance and has native PABX interface in the system controller.

MASS NOTIFICATION

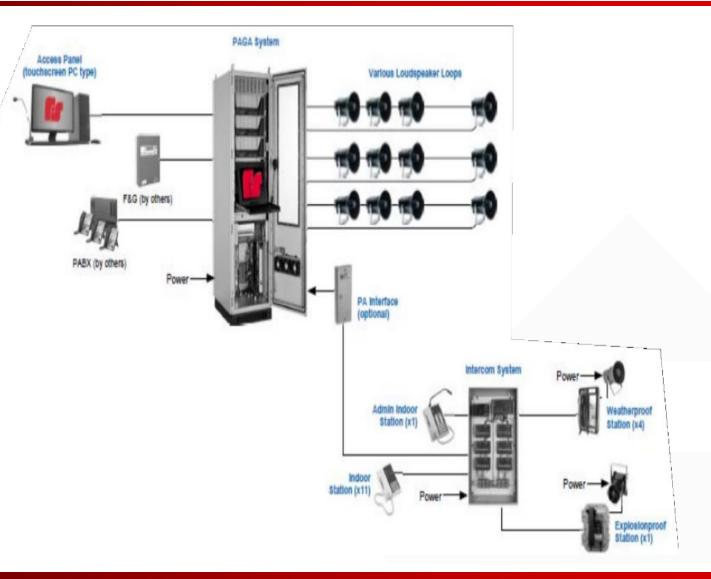




MASS NOTIFICATION

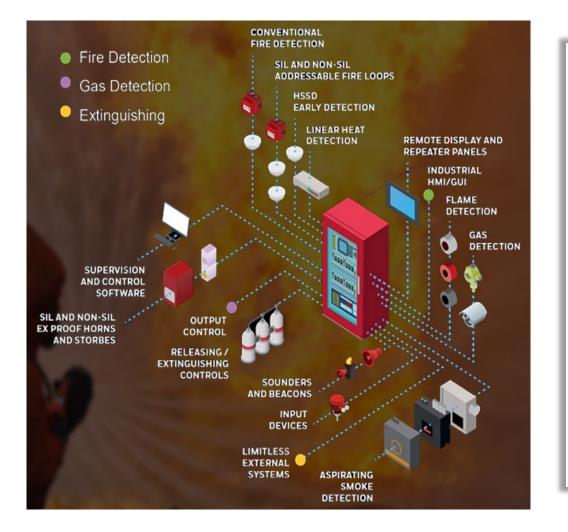


Public Address & General Alarm (PA/GA)



FIRE ALARM SYSTEMS



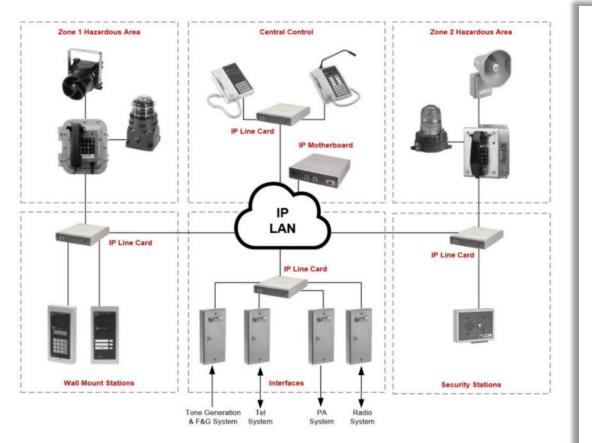


An innovative, modular system that combines highly reliable programmable logic controller (PLC) technology with advanced gas and flame field devices. It is highly scalable, making it suitable for small systems to large plant-wide applications.

- Fire Panels
- Fire Detectors
- Smoke Detectors
- Linear Heat Detection System
- Fire Suppression System

COMMUNICATION SYSTEMS





Telephony Systems:

- Resistant to large temperature differences, air humidity, sea water, dust, and strong mechanical wear and tear.
- Certified for use in hazardous dust and gas atmospheres.
- Impact-resistant and shockproof glass fiber reinforced polyester (GRP) and is resistant to acids, seawater, alkalis, moisture, and grease.
- Completely programmable and has been equipped with a 21-piece stainless (V4A) steel keypad designed for use with gloves.

SIGNALING



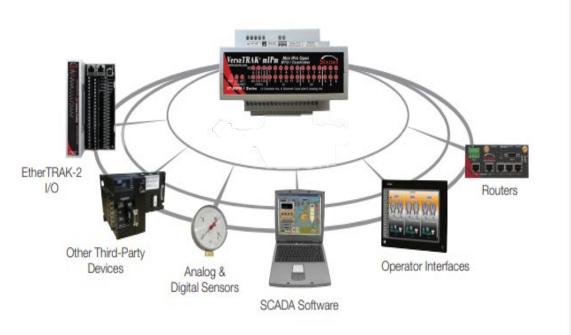


Beacons

- Have an array of 12 powerful LEDs arranged below a reflector. The reflector focuses the light from the LEDs into a high intensity beam and rotates 360 degrees.
- Speakers, Sounders, & Horns
- Strobes are made of high-intensity xenon strobe tube operated at 21J. The housing is made from non-metallic materials.
- The Speakers can broadcast tones generated by a tone card installed into the speaker or by a central tone source in a voice evacuation or paging system.

NETWORKING





Network Cables

- Used to connect one network device to other network devices or to connect two or more computers to share printers, scanners etc.
- Network Switches
- Connects devices on a computer network by using packet switching to receive and forward data to the destination device.
- Network Accessories
- Include switches, cables, hubs, routers, and modems.

CRITICAL POWER SOLUTIONS









UPS

- Provides emergency power to a load when the input power source or main power fails.
- Junction Boxes & Cabinets
- Protects electrical connections from environmental changes and prevents electrical shocks.
- Automatic Transfer Switches
- Starts generator and switches load over upon mains failure (and back to the mains supply when it returns).

SECURITY





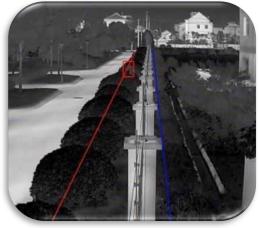
- Access Control & Gate Systems
- The entry gate system sends credentials through reader and gets sent to electronically authenticate in a user database.
- Closed-Circuit TV Systems (CCTV)
- System of video cameras that transmit a signal to a specific, limited set of monitors.
- Security Communication Systems
- When the security system is armed at the control panel, these sensors communicate with it by reporting that the point of entry is secure.
- Perimeter Intrusion Detection
- Device or sensor that detects the presence of an intruder attempting.

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SECURITY











Perimeter Intrusion Detection

• Device or sensor that detects the presence of an intruder attempting.

Al Security Systems

- Watch Box is designed to automatically, control the boundaries of your property. Alarms can be sent by e-mail, WatchBox App, Milestone Mobile Client or also to existing alarm system.
- LiDAR Integration Analytics includes object counting, occupancy monitoring, proximity detection, perimeter protection, intrusion detection and cross-camera object tracking.
- Video Analytics is a flexible and scalable solution based on Deep Learning for professional users in various industries.
- Control Center characterized by highest stability, accuracy &quality, easy configuration, VMS integration as well as excellent support.

SAMPLING





Automatic Samplers

- Equipped with a transmitter that is able to receive external signals, e.g. from a flowmeter.
- Manual Samplers
- Designed for fast quality control and testing work. It is ideal for liquid sampling up to about 4.

Sample Coolers

• Designed to be compatible with any type of heat exchanger, including tube heat exchangers, shell heat exchangers or shell and tube heat exchangers.

PROCESS INSTRUMENTATION





Level & Measuring Transmitters

- Sensor and electrical transmitter, that provides continuous level measurement.
- Pressure & Temperature Switches
- Consists of a pressure switch that has a sealed temperature sensing bulb attached directly to the pressure port.
- Flow Transmitter
- Sensors with an electrical transmission output for remote indication of flow rate.
- Pressure Transmitter
- A pressure sensor is a device for pressure measurement of gases or liquids.

PROCESS INSTRUMENTATION





Differential Pressure Transmitter

• Consistently and accurately create a pressure drop in a pipe and then use the pressure measurement on either side to provide the rate of flow within the pipe.

Temperature Transmitter

• Act as an interface between a temperature sensor and the display or control device.

Pressure Gauges

 Instrument for measuring the condition of a fluid (liquid or gas) that is specified by the force that the fluid would exert, when at rest, on a unit area, such as pounds per square inch or newtons per square centimeter.

INDUSTRIAL CONTROL & AUTOMATION















Automation & SCADA

• Work by connecting local sensors, devices, and PLCs to an onsite server or remote/virtual machine.

Annunciators

• The purpose of an alarm system (annunciator) is to bring attention to an abnormal or unsafe operating condition in the plant.

Controllers

• Capable of integrating logic, motion, robotics, and communicating with other machines and management systems.

RTUs

• Microprocessor-controlled electronic device that interfaces objects in the physical world to a distributed control system or SCADA system.

INDUSTRIAL CONTROL & AUTOMATION





VFDs

• Used in electro-mechanical drive systems to control AC motor speed and torque by varying motor input frequency and, depending on topology, to control associated voltage or current variation.

Switches

• Disconnect or connect the conducting path in an electrical circuit, interrupting the electric current or diverting it from one conductor to another.

WATER DISINFECTION SOLUTIONS





Chlorine Dioxide Generator:

- EuroClean OXCL generator is fully automatic and designed so that the ClO₂ solution is always fresh and maximally effective.
- The OXCL generator safely prepares a chlorine dioxide (CIO₂) solution and subsequently uses it for the disinfection of potable, hot or industrial water.
- The device has its own unique vapor filter.
- It has a control unit, which shows the current flow rate, the amount of chemicals and servicing or alarm notifications.

SERVICES

ENGINEERING





Sherbiny offers engineering services designed for all your operations.



- Designs & Studies
- Simulations
- CAPEX / OPEX Estimations
- Feasibility Studies
- Technical Documentation
- Decision Support
- Engineering Project Management
- Fire & Gas Mapping

TECHNICAL SERVICES & SUPPORT





Sherbinyofferstechnicalservices& supportdesignedfor all your operations.



- Calibration Services
- Installation, Testing & Commissioning
- Operational Spares
- Maintenance & Repair
- Technical Consultation
- Aftermarket Service & Support
- Hydraulic Calculation
- Equipment Sizing
- Equipment Layout

MEDIUM & HEAVY STEEL CONSTRUCTION





Sherbiny offers medium & heavy steel construction services for all your operations.



Construction & Project Management:

- Our Engineering Team provides a complete solution for your project needs, from exploring technical problems, through design, to full engineering support for project implementation.
- We employ our experience and knowledge to assist our clients in achieving the optimal and cost-efficient solutions to their issues both in the design of plant type facilities and customized equipment.
- Our goal is to make industrial processes safer, more efficient and promote environmentally friendly technologies, according to the specific needs of our clients.

SPECIALTY

DUST SUPPRESSION & CONTROL





Dry Fog System

 Uses air atomizing nozzles that produce water droplets 10 micron or less. These ultra-fine water droplets add less than 0.1 percent of moisture by weight and attach to like size dust particles and drop them back into the process.

Wind Fences

• Reduces dust emissions caused from wind erosion on open stockpiles. Designed to exert a drag force on oncoming wind and reduce wind speeds up to 75% within the sheltered area.

Water Spray Systems

• Uses a high-pressure pump and a variety of spray nozzles to add the right amount of water to your material.

STORAGE TANKS



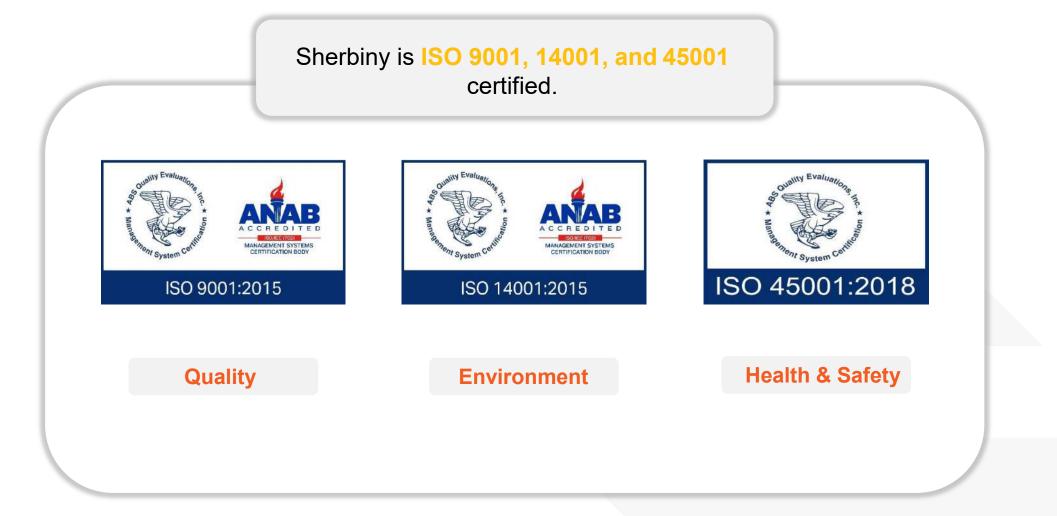


Storage Tanks

- Storage tanks are containers that hold liquids, compressed gases (gas tank; or in U.S.A "pressure vessel", which is not typically labeled or regulated as a storage tank) or mediums used for the short- or long-term storage of heat or cold.
- Storage tanks are available in many shapes: vertical and horizontal cylindrical; open top and closed top; flat bottom, cone bottom, slope bottom and dish bottom. Large tanks tend to be vertical cylindrical, or to have rounded corners transition from vertical side wall to bottom profile, to easier withstand hydraulic hydrostatically induced pressure of contained liquid. Most container tanks for handling liquids during transportation are designed to handle varying degrees of pressure.
- We offer GLS, GFS and stainless-steel tanks for all industries.

CERTIFICATIONS





KEY PARTNERS





KEY CLIENTS





COMPLETED PROJECTS



Selected Top Projects

SAUDI ARAMCO

ELDS Gas Detector - Shaybah NGL (SNGL)

SAUDI ARAMCO

• Safaniyah PAGA system.

SAUDI ARAMCO

Upgrade H2S detector MOS to EC – SAGPD

SAUDI ARAMCO

Fire protection system extentuin – MARAJAN
GOSPs 2 & 3 & ZULUF GOSP 4

H.K. Alsadiq Sons

 Juaymah Tank Farm, in Juymah, H.K. Alsadiq Sons (Siren System)

Saudi Services Electro Mechanic Works Co.

• Engineering, document submittals, design, manufacturing, inspection and testing in works, packing, supply and delivery of Butterfly valves

Maaden

Installation of 6 water intake pumps

Yasref

• Installation of 5 New Slop pumps

YANSAB

New Development P-7401 A/B Fuel Oil Pumps

SAUDI ARAMCO

• Pumps Replacement AINDAR - GOSP 1, 2, 3, 4 & 6

COMPLETED PROJECTS



Selected Rasana Projects

ARAMCO – RAS TANURA [via NALCO]

• 2 Chemical Dosing Skids and I&C

SABIC – YANPET

• Dosing Skids with 13 pumps and I&C

SABIC – SAFCO [via JAL Intl.]

• Chemical Dosing Skid with 3 pumps and I&C

SAMREF

• Caustic Dosing Skid with 2 pumps and I&C

FARABI [via NALCO]

• 5 Skids for Cooling Water Treatment Unit and I&C

SADARA

• HCI Dosing Skid Package with VSD and I&C

MA'ADEN

• Cyanide Auto dosing Skid with 5 peristaltic pumps

COMPLETED PROJECTS



Selected International Market Projects

Birla Carbon Hungary

- Waste heat recovery system of air compressors, Detail Design
- Tail Gas Seal Water Drum replacement, Detail Design

Procter & Gamble

• Auxiliary sealing system for process pumps

MOL Logistic

• Adria Crude Oil transfer pumps & auxiliary system, Detail Design

Hexan LLC

 Mobile fuel loading skid design and fabrication support

Veolia Water Solutions

• Wet cooling tower system, Detail design and EPC support

Huntsman Corporation Hungary

- 5 Falcon Project (2500 t/y special amine plant) Feasibility Study with +/-±30% cost estimation support
- Vacuum Distillation Column replacement, Detail Design & Site support

Xellia Pharmaceuticals

 Solvent Regeneration Unit Reconstruction, Feasibility Study with +/-±30% cost estimation support

Paks Nuclear Power Plant

 Feasibility study for cooling system availability improvement

Swiss Fire Protection Research & Development AG

- Mobile instant foam fire-fighting trailer, FEED design
- Instant foam fire-fighting container, FEED design







THANK YOU



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